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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,620	03/02/2004	Benjamin Shultes III	GC-220CIP	3155
40097	7590	01/25/2008		
ARTHUR J. PLANTAMURA, ESQ. GENERAL CHEMICAL PERFORMANCE PRODUCTS LLC. 90 EAST HALSEY ROAD PARSIPPANY, NJ 07054			EXAMINER VANOY, TIMOTHY C	
			ART UNIT 1793	PAPER NUMBER
			NOTIFICATION DATE 01/25/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/791,620

**Applicant(s)**

SHULTES ET AL.

**Examiner**

Timothy C. Vanoy

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 1 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08).  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Oath/Declaration*

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it does not identify this application as a continuation-in-part of 10-244,692.

### *Specification*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally **limited to a single paragraph** on a separate sheet within the range of 50 to 150 words. It is important that the abstract **not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

- a) *In this application, the abstract is not in the form of a single paragraph.*
- b) *In this application, the abstract exceeds 150 words in length.*

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly

those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

**The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.**

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

- a) *In this application, the abstract refers to the purported merits and speculative applications of the invention.*
- b) The typing at the top of pg. 7 in the specification is not double-spaced.

### ***Claim Objections***

- a) In claim 1 line 2, "comprise" should be replaced with --comprises--.
- b) In claim 1 line 4, "and" (both occurrences) should be deleted.
- c) In claim 1 line 6, it appears that "changes" should be replaced with --charges--.
- d) Claim 5 is objected to because the "or lime" limitation does not further limit claim 4.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) In claim 10, the phrase "about 1.0% phosphoric acid is added" and in claim 11, the phrase "wherein 1.0% to about 3% phosphoric acid is added" are vague and indefinite because it is not clear if the percentages of the phosphoric acid refer to: (i) the weight percent of the entire composition, or (ii) the concentration of the phosphoric acid solution added to the entire composition.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. 1,986,091 to Wood.

Pg. 1, col. 2 lns. 36-43 in the Wood patent describes a method in which an alkali is added to a solution of aluminum sulfate to produce a basic aluminum sulfate. Pg. 2, col. 1 ln. 72 in the Wood patent sets forth that the basic aluminum sulfate is filtered off and dried. Pg. 2, col. 2, lines 8-13 in the Wood patent describes the basic aluminum sulfate as a compound of the general formula:

$\text{Al}_4(\text{OH})_{10}\text{SO}_4$  (i. e. the Applicants' "polyaluminum sulfate reaction product").

Please note that Example 3 in the Wood patent sets forth that the "alkali" used is sodium carbonate.

The difference between the Applicants' claims 1, 2, 9 and 12 and the Wood patent is that these claims describe the weight percentages of the aluminum sulfate in

the solution and also of the alkali, *however* it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made *because* it is obvious to have determined (with minimum testing) what the suitable relative proportions are of the aluminum sulfate and alkali reagents effective for obtaining additional polyaluminum sulfate product (i. e. beyond those that are exemplified in the Wood patent). The broad teachings of the Wood patent at least generally suggest such routine optimization of this result-effective variable (please note that pg. 2, col. 2 lines 32-36 in the Wood patent sets forth that their invention is not limited to the specific amounts of ingredients set forth in the examples).

The difference between the Applicants' claims and this Wood patent is that the Wood patent does not expressly teach the claimed alkalis set forth in Applicants' claims 3-8, 13 and 14.

The Wood patent in pg. 2, col. 2 lns. 32-38 discloses that their invention is not limited to the specific compounds set forth in the examples. For example, the caustic soda may be replaced by an equivalent amount of another alkali, such as caustic potash. The Wood patent in pg. 2, col. 2 lns. 43-48 discloses that the sodium carbonate may be substituted by another alkali such as caustic soda, caustic potash, potassium carbonate, etc.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made *to have modified* the process described in the Wood patent *by replacing* the sodium carbonate alkali used in Example 3 in the Wood patent with another, different alkali (such as the alkalis recited in Applicants' claims 3-8, 13 and

14), in the manner that would arrive at the invention of at least Applicants' claims 3-8, 13 and 14, *because* the disclosures set forth on pg. 2, col. 2 lns. 32-38 and 43-48 in the Wood patent fairly suggests such a substitution.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. 1,986,091 to Wood as applied to claims 1-9 and 12-14 above, and further in view of U. S. Pat. 4,238,347 to Gancy et al.

The Wood patent renders obvious the limitations of Applicants' claims 1-9 and 12-14, as discussed in the above 103 rejection.

The difference between the Applicants' claims and this Wood patent is that Applicants' claims 10, 11 and 15 set forth that phosphoric acid is added.

The Gancy et al. patent sets forth that phosphates increase the redissolvability of the materials (i. e. the polyaluminum sulfates): please see col. 3 lns. 26-30 and Example 2 in the Gancy et al. patent.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made *to have modified* the process and product compositions of the Wood patent *by incorporating* phosphoric acid, in the manner that arrives at the invention of at least Applicants' claims 10, 11 and 15, *because* col. 3 lns. 26-30 and Example 2 in the Gancy et al. patent fairly suggests that the presence of the phosphoric acid increases the redissolvability of the polyaluminum phosphates.

The following references are made of record:



U. S. Pat. 4,284,611 disclosing an aqueous phosphate-stabilized polyaluminum sulfate solution and preparation thereof;

U. S. Pat. 4,131,545 disclosing a phosphate-containing basic aluminum solution (please see the abstract);

U. S. Pat. 2,332,285 disclosing the production of aluminum sulfate solutions;

EP 0 069 719 A1 disclosing a method for producing basic aluminium sulphate;

EP 0 069 718 A1 disclosing basic aluminium sulphate, its manufacture and its use;

the English abstract of GB 445,711 disclosing a solution containing basic aluminium sulphate, and

the English abstract of GB 109,998 disclosing improvements in the treatment of aluminous compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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*Timothy C Vanoy*  
Timothy C Vanoy  
Primary Examiner  
Art Unit 1793

tcv